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ABSTRACT

The diverse literature on policy design and policy instruments is reviewed in this paper, which also addresses such issues as the definition of a policy design perspective, the categorization and variables of policy instruments, and improvement of the design process. The first part presents a general discussion of the perspective of policy formation known as "policy design." The next part examines several recently developed typologies of governing instruments (tools used to fulfill goals) with attention to four basic government resources--nodality (property of being in the middle of an information or social network), treasure, authority, and organization. Factors for choosing among policy instruments are also discussed, which include the attributes of instruments, the context in which assessment occurs, and endogenous variables. The final part suggests an improvement strategy based on a more systematic analysis of the underlying structural logic of policy examples and the development of a synthesis of policy instrument classifications and their characteristics. Conclusions are that many policy failures can be traced to flaws in the instruments of government and in policy design. The new approach should concentrate on the generic tools of government action rather than on individual programs. Six figures and two tables are included. (88 references) (16 endnotes) (LMI)

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# Backtracking to Policy Design
# Un retour au point de conception de la politique

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**Backtracking to Policy Design**
**Un retour au point de conception de la politique**

During the past few years educational jurisdictions throughout North America have enacted a variety of policies to reform public education. The extent of new educational policy initiatives undertaken in many American states and Canadian provinces during this time is "staggering" (Mitchell, 1988, p. 459). Although many of these provisions have focused on relatively narrow issues (student testing), other policies have involved comprehensive changes in school programs (for example recent restructuring in British Columbia, and Alberta). Corresponding to this explosion of policy making, has been a growth in policy research. Much of this research focuses on the historical recurrence, or the "waves", of reforms that have occurred during the past decades (Bacharach, 1990; Cuban, 1990; Kirst, 1990; Passow, 1990; Soltis, 1990). A number of factors have been proposed to explain the recurrence of reforms. Policy researchers advocating rational approaches to educational change argue that educational reforms recur because policymakers fail to learn from the past (Katz, 1987), or because policy makers respond to political demands and fail to evaluate policies prior to implementation (Salvin, 1989). Others adopting a political perspective, suggest that the persistent need for reforms arise from conflicts between competing social values which are embedded in the educational system (Guthrie, 1987). It is argued that value conflicts cannot be easily solved by rationally derived solutions, rather, they require political negotiation and compromises among policymakers and interest groups (Cuban, 1990).

An earlier, but related, strand of policy studies focused on implementation problems of educational reforms. Beginning with the classic studies showing how the intentions of the U.S. federal government ESEA were modified at the local level (Murphy, 1971), the studies went on to show how "street level bureaucrats" reshaped policy (Weatherley and Lipsky, 1977; Mann, 1978), how policy implementation involves a process of mutual adaptation by local sites and innovations (Berman and McLaughlin, 1976), and how the making and implementing of policy continues throughout the implementation process (Weatherley and Lipsky, 1977). Some policy researchers have concluded that in order for educational reforms to be effective, the "top-down" approaches to policy making should be replaced with "bottoms-up" leadership and decision-making approaches. (Weatherley and Lipsky, 1977). Other analysts, using a

market-oriented, public choice approach, argue that changing policy and leadership strategies is not enough, the basic structural arrangements must be modified (Boyd and Crowsen, 1981; Michaelsen, 1981; Ostrom and Ostrom, 1971). Radical political economists argue that because the basic structures of capitalist societies use schools to reproduce the inegalitarian social-stratification in order to maintain the status quo, reforming public schools is extremely difficult (Bates, 1980; Bowles and Gintis, 1976).

Boyd (1988) points out that although these explanations call attention to important barriers to educational reforms, none are complete. Such explanations of the causes of recurrent reforms and implementation failures are plausible, however, there is also much that is not explained by these perspectives on reform. Despite the extensive research that has focused on policy implementation and reform during the last decades, the link between research and policy making has been weak. Critics charge that many of the new initiatives have not been fully supported by research, and are, consequently, ineffective and uninformed. Past research on implementation has, in fact, provided limited guidance for policy makers because it has focused on relatively narrow programs, and has not systematically specified the "relationships among the problems being addressed, the basic design features of the policies, the implementing organizations, or the political and organizational context in which policy targets must respond" (McDonnell and Elmore, 1987, p. v.). It is the challenge of the next generation of policy research to "apply the lessons of past implementation studies in building a more powerful conceptual framework and in producing more useful information for policymakers" (p. v).

Policymakers developing reform initiatives rarely have detailed information about the range of policy instruments available, and about the political and organizational contexts required for the instruments to work as intended. Research is needed to provide more comprehensive information about the policy instruments available to educational policymakers, and about approaches to designing policies (Boyd, 1988; Linder and Peters, 1989; McDonnell and Elmore, 1987; Schneider and Ingram, 1989).

## Objectives

The purpose of this paper is to organize the diverse literature on policy design and policy instruments by addressing the following key questions:

- What is meant by a policy design perspective?
- How are policy instruments categorized?
- What variables influence instrument choice?

• How can the policy design process be improved?

In addressing these questions the paper first undertakes a general discussion of the perspective on policy formulation that has come to be know as "policy design". One of the key components of policy designs are the tools, or instruments, governments use in fulfilling their goals. The paper, therefore, examines several typologies of governing instruments that have been developed recently. Choice among policy instruments, which goes to the heart of the design process, is then explored. The paper concludes by suggesting an approach to improving the design process based on a more systematic analysis of the underlying structural logic of policy examples.

## The Design Perspective

The focus on the instruments used by government to achieve policy goals falls within the more general concern for policy design (Alexander, 1982; Bobrow and Dryzek, 1987; Dryzek, 1983; Ingraham, 1987; Linder and Peters, 1984, 1988; 1989; Schneider and Ingram, 1989). Cataloging various approaches to design and describing how designs are devised is a relatively recent phenomenon in policy studies (Dryzek, 1983; Linder and Peters, 1984; Schneider and Ingram, 1989). Policy design has been conceptualized as the process of formulating policy alternatives, and it has also been viewed as the content of policy. Recent research has shown that both conceptualizations are important aspects of policy making.

Simon (1981) was one of the first to identify the critical role of policy design, arguing that "the theory of generation of alternatives deserves, and requires, a treatment that is just as definitive and as thorough as the treatment we give to the theory of choice among pre-specified alternatives" (p. 121). Policy researchers have found that implementation failures can be traced back to the statutes that structure implementation (Ingram, 1989; Sabatier, 1986). Linder and Peters (1988) argue that design plays a more critical role in determining policy outcomes than does implementation. Despite its crucial role, design is the least analytically developed stage in the policy process. Current policy research has provided some insights into how governments set agendas (Kingdon, 1984), however, less is understood about the choice of instruments and the design of policies (Linder and Peters, 1988).

It is, however, clear that policy design is not concerned with entirely new issues in policy formulation. In fact, the newly labelled perspective of "policy design" incorporates many of the concerns of researchers who have examined policy formulation. In emphasizing problem recognition, objectives definition, and the consequences of policy initiation activities, on subsequent stages of

policy making, Brewer and De Leon (1983) draw upon Lasswell's (1951) discussion of the importance of values in the formulation of policy. However, the initial application of concepts drawn from the design sciences appeared in planning literature. Those in applied disciplines, such as architecture, who addressed the organizational problems of urban environments, attempted to develop systematic and rational techniques for problem solving that would separate the designer from the thing to be designed (Linder and Peters, 1984). Herbert Simon's (1978) interest in the design process was directed at problem-motivated design, and emphasized the "hierarchical structure of problems and the strategies for their decomposition" (Linder and Peters, 1984, p. 240). More recently, a number of authors adopting the design perspective have attempted to systematize the process of policy formulation in order to overcome the biases of policymakers. (Drysek, 1983; Linder and Peters; 1989; Mosher, 1980; Salamon, 1981; Schneider and Ingram, 1989).

Policy design has been defined as "the process of inventing, developing and fine-tuning a course of action with the amelioration of some problem or the achievement of some target in mind" (Drysek, 1983, p. 346). It is directed at the domain of those fundamental decision-making processes of government that create public policies. The complexity and uncertainty surrounding policy making has led to the prevailing cynicism concerning "the ability of social science to contribute to policy choice" (p. 346). Critics suggest that designs are not needed, rather policy choice occurs through "unselfconscious choice mechanisms" such as "invisible hand market systems", and the incrementalist decision processes that have been called "muddling through" (Lindblom, 1959; 1965). The argument by both conservative economists and cultural pluralists is that unselfconscious choice mechanisms do not require conscious design activity. In the face of inappropriate policies, interest groups can form and make demands that provide feedback to the system (Dryzek, 1983). Moreover, critics charge that the actual decision-making process occurs within such loosely coupled systems that the links between problem recognition and solution generation are particularly tenuous. Choice is less a factor of design than it is a "garbage can", in which problems, interpretations and solutions move between choice opportunities (Cohen, March and Olsen, 1972).

Proponents of policy design, however, suggest that there are a number of threats to unselfconscious choice that constrain the possibility of the automatic feedback. Feedback is distorted because of imperfect access and communication, such as occurs when the powerful prevail in placing their interests on the policy-making agenda. It is also distorted because of long time lags between policy implementation and its effects. The irreversibility of many policy actions mean that unplanned feedback on its effects is not relevant.

Further, some public policies require such large-scale resource commitments that incremental muddling will likely be possible only after initial large steps have been taken. Finally, the combination of complexity and rapid change characteristic of many policy problems is "devastating to unselfconscious policy choice" because it minimizes the adaptive capacity of the policy system (Dryzek, 1983, p. 348). Unselfconscious responses of decision makers to the complexity of complex policy problems such as denial, simplification, vacillation, and retreat to standard operating procedures, do not produce optimally effective policies (Brewer and deLeon, 1983, pp. 87-90).

Those adopting the design perspective believe that policy making, in the face of the uncertainty and complexity of modern policy problems, requires "a model of causation, a model of evaluation, and a model of interventions" (Linder and Peters, 1984, p. 241). Models of causation enable policy makers to relate outcomes to policy problems. Evaluation models allow some course of intervention to be mapped out. Finally, models of interventions guide the selection of interventions that will produce the desired outcome. Policy design is offered as the most useful perspective from which to address these demands of policy formulation. Dryzek (1983), for example, argues that policy problems generally, including those characterized by both high uncertainty and complexity, and truly novel policy problems, can, in fact, be best handled through a design perspective. The analysis entailed in this perspective includes both "a systematic process for generating basic strategies and a framework for comparing them" (Linder and Peters, 1984, p. 237). Policy design supports a degree of "rationality and rigor, first in structuring and then in overcoming problems" (Linder and Peters, 1988, p. 739). Ingraham (1987, p. 611) elaborates:

> An emphasis on policy design will raise new questions, directed towards a new set of concerns: the match between problems and solution, the consideration of possible policy options, and the extent to which more rigorous consideration of the components of design can realistically be incorporated into existing policy processes.

Proponents of policy design suggest a number of elements are required to deal with the complexity and uncertainty of most policy problems. Dryzek (1983) notes that analysis requires understanding of contexts, actions, and theories. Important dimensions of the context of a policy problem must be taken into account, and policy alternatives must be generated to address these dimensions. The generation of alternatives is, however, not to be dismissed as a creative task, but rather can involve systematic search activities such as

"identifying and examining different classes of actions" (p. 358). Further, search can be informed by "heuristics such as simplicity, parsimony, elegance, novelty, flexibility. . . and general interest of proposals" (p. 359). Dryzek argues that these processes require considerable "theoretical understanding" (p. 359). The problem facing analysts is to identify the theoretical perspective appropriate to a particular problem. Typically, analysts adopt a particular perspective and apply its favored instruments to any problems encountered. This narrows the possible policy options that are applied. Policy analysts, however, need an array of methods, as well as a good understanding of the circumstances in which they are appropriate.[1] According to Dryzek, the design perspective, therefore, requires that policy makers and their advisors have a broad understanding of policy formulation theories. Underlying these three components is the recognition that design involves the creation of a policy to promote a valued outcome in a particular context. Design therefore "stresses context sensitivity, the application of tools in pursuit of values, and a special focus on factors open to change by human agents" (Bobrow and Dryzek, 1987, p. 200).

The importance of policy instruments is recognized by most policy scholars. Like Dryzek (1983), Linder and Peters (1984) propose an approach to policy design that includes a focus on: the characteristics of instruments, the characteristics policy problems, and the characteristics of goals. In a more recent discussion of policy design, Linder and Peters (1989) also include instruments among the elements that form the basis of policy design. These elements include:

1) policy instruments, "the basic building blocks of public policy";

2) attributes of these instruments;

3) contexts within which assessment typically occur; and

4) users and purveyors of instruments. (p. 42).

Policy instruments or the tools of government are a major component of most theories of policy design. Knowledge of these tools is beginning to accumulate as a result of efforts develop typologies of instruments, and to describe their characteristics. Addressing the second question posed in this paper: "How are policy instruments categorized?", the following section of the paper examines several important attempts to classify governing tools.

## Classifications of the Instruments of Government

Governments, by virtue of their vested and legitimate authority, are responsible for maintaining or changing patterns of social behaviour on behalf of the public good. In fact, it can be argued that "government itself may be seen

as a grand instrument of conscious, collective action" (Pal, 1987, p. 143). Applied to government policy making, the term "instruments" implies the use of devices or techniques, or "means through which the ends of political life are achieved" (Doern and Phidd, 1983; p. 111). Policy instruments are, however, more than techniques, they are imbued with value, and represent ends in themselves. Because they alter the process and content of policy making, they are the focus of some political dispute. Disputes arise over the nature and extent of the responsibility of governments, and the instruments they use to fulfil this responsibility. It is generally agreed that modern governments have increasing come to rely on more extensive, and in come cases more imaginative, ways of achieving their means than previously. It is now commonly recognized that policymakers have a broader range of instruments available to achieve their goals than simply expenditures or taxation.

A number of attempts have been made to develop typologies of policy mechanisms. These classifications have provided useful inventories of policy tools. The following section of the paper will review and synthesize the important attempts to classify policy instruments, and to describe their characteristics. (Kirschen, 1964; Mosher, 1980; Salamon, 1981; Doern and Phidd, 1983; Kettl, 1987; Hood, 1984; McDonnell and Elmore, 1987).

## Economic Policy Instruments

Kirschen's (1964) analysis of the economic policy tools used by government was one of the first attempts to classify policy instruments. By "instrument", this analysis meant the means by which the objectives of government are pursed. The assumption that there are optimal tools for economic intervention by government provided the basis for this comprehensive analysis. Kirschen identified five families of instruments including: public finance, money and credit, exchange, direct control, and changes in the institutional framework (p. 16). Although this inventory provided a useful checklist of 64 economic instruments, it did not describe the effects of these instruments, nor did it include the non-expenditure instruments that governments commonly use.

The distinction between expenditure and non-expenditure instruments has been made by others who also note the increasing use of non-direct expenditure instruments, often involving third parties. For example, the simple dichotomy between direct and indirect instruments of government formed the basis of Mosher's (1980) catalogue of the instruments available to governments. Mosher argued that since WWII there has been tremendous growth in the involvement of the American federal government in many sectors of society. The growth has been a response to the expanding responsibilities

for increasingly complex human problems faced by governments. However, this involvement has been largely uncoordinated and has involved piecemeal responses "through fragmented institutions and practices, conceived with almost unbelievable inventiveness" (p. 545).

Mosher further argues "these have added new and complicated twists to old tools, like grants and contracts and regulations and tax deductions to the point that these kinds of devices are more important in the big picture than the things that government does for itself" (p. 545). Many new instruments have involved only moderate increases in federal expenditures in relation to the total economy, and have occurred with only minor decreases in the size of the federal bureaucracy. These modifications were possible because of an increased reliance upon indirect administration through third parties, and greater reliance on non-expenditure and indirect instruments such as "negotiation, collaboration inducements, persuasion, rewards, and penalties" (p. 546).

## Instruments of Indirect Service Provision

Others have taken up this argument. Salamon (1981),[2] and more recently Kettl (1987), have focused on third-party government and a simple dichotomy between direct and indirect service provision. Like Mosher (1980), Kettl points to the paradoxical increase the scope and extent of American federal government spending on programs that has occurred during the past thirty years without a concomitant increase in the size of the federal bureaucracy. He explains that the growth in government programs has been possible because of the increase in indirect service provision by government. This form of what he calls "government-by-proxy" has produced a number of new policy strategies, or instruments of program administration.

Kettl identifies five forms of government-by-proxy: contracts, grants to state and local governments, tax expenditures, loan programs, and regulation. Governments commonly contract with the private sector for many of the goods and services they produce. Grants to state and local governments by the federal governments of both Canada and the U. S. are another form of government-by-proxy. Both federal governments have also created a number of tax incentives, or tax breaks, in order to influence the behaviour of taxpayers. Loan programs, such as those provided to students, are another instrument used by governments to achieve their goals. Finally, all levels of government commonly develop "vast networks of rules" governing activities for which they assume responsibility (p. 4). These instruments are distinguished from other forms of direct service provision by their reliance on proxies, or "intermediaries

responsible for producing the goods or services - in place of direct administration of programs by the government" (p. 4). Although none of these strategies are necessarily new, Kettl argues that what is new "is that these strategies have grown into the predominant form of government activity" (p. 4).

The factors responsible for the growth government-by-proxy are complex, but related to four developments that have occurred during the past decades. First, the scope of government action has increased to the point where some suggest that "government today is charged with ultimate responsibility for the employment and the basic welfare of the citizenry" (Weidenbaum, 1969, p. 7). A second development that has influenced the expansion of government use of proxies has been the increasing technical complexity of many government programs. Such programs have required expertise often only available from government proxies. A third development that has influenced the expansion of government-by-proxy has been the budget constraints faced by governments during the past two decades. The rising cost of government, combined with taxpayer resistance to tax increases during this time, led governments to find new strategies, such as the use of proxies, to circumvent budget politics.

Finally, the use of proxies has been supported by the theories of decentralization and public choice, which have gained prominence during these decades. Decentralization is not a new strategy. Governments have in the past adopted administrative decentralization by delegating responsibility and authority for managing programs. They have also promoted political decentralization by giving over basic decision-making powers, and the responsibility for those powers, to other bodies. Government-by-proxy is, however, distinct. It is more than administrative decentralization, because very broad authority is commonly shared by a proxy, but it is also less than political decentralization, because government does not give up complete authority (Salamon, 1981).

More recently public choice theory, drawn from economics, has provided an influential rationale for governments to privatize, or to rely more on the private sector, to achieve their goals.[3] Powerful as public choice theory has become, it still raises critical issues in governing-by-proxy, such as: what should be privatized, and how should privatization be managed? The question of what should be privatized is complex, and rests on value-determined views of which functions are public, and, therefore, what the responsibilities of government are.[4] The question of administration of privatized programs is often overlooked by public choice proponents who commonly assume that the self-regulating features of the market will take care of all contingencies. However, as Kettl (1988) argues, "government-by-proxy programs do not administer themselves. .

. rather, they generate their own set of administrative problems that must be solved if they are to be successful" (p. 13). Instead of the invisible hand of the market guiding newly privatized programs, it appears that government continues to play an important role. In fact, Kettl suggests that the increase in the use of instruments for government-by-proxy "means that the public-private distinction is no longer very distinct" (p. 13).

The interdependences between public and private sector organizations created by indirect instruments result in several problems. Because instruments for government-by-proxy involve shared authority, questions arise such as, who is ultimately responsible for performance? Interdependences created by these instruments may also result in conflict of values between government emphasis of consensus and compromise, and private sector stress of profit and control (p.15).

Managing this interdependence is different from managing direct service-delivery provisions. Two problems must be overcome. First, the goals of proxies must be synchronized with public goals. Salamon (1981) points out that incongruencies can arise between the goals of the federal government and those of the non-federal implementing agencies, whether these are for-profit organizations, or state and local governments. He argues that "proposals to turn more decision-making power over to the states and localities, thus, involve more than questions of administrative efficiency, they also involve questions of program purpose and substance" (p. 267). Managing the instruments of government-by-proxy means finding ways of aligning program goals, a difficult task given the characteristically loose, and ill-defined, nature of most government goals, and the technical complexity of many government programs.

Obtaining feedback poses a second problem in managing indirect service instruments. Governments require accurate information about what is being accomplished in order to detect non-compliance, and to adjust goals as programs are implemented. However, obtaining feedback from proxies without the presence of extensive filtering and distortion is even more difficult than it is through the usual bureaucratic channels of government. Despite these difficulties, the ill-defined nature of government goals means that feedback is a particularly important part of the implementation of programs. Implementation can, in fact, be viewed as "error correction" resulting from a testing and feedback process (Levin and Ferman, 1985, p. 14). Information about problems helps to identify their causes, and, thereby, may ensure their solution. Information about problems may also trigger what Kettl (1988) calls "the horror-story syndrome" of failed program implementation, which triggers defensive positioning of government officials and proxy agents, and the involvement of the

media and interest groups. Because proxies are well aware that in such instances governments commonly respond with a regulatory-recentralization reflex that threatens their survival, they will often attempt to minimize risks. However, this reaction is detrimental to the process of solving problems, because progress ultimately requires learning from mistakes.

The preceding discussion confirms that the unique features of the different government-by-proxy instruments require different management strategies in order to solve the problems of goals and feedback. Kettl outlines the differing approaches to aligning goals and obtaining feedback required for government-by-proxy instruments to succeed (p. 158). He suggests, for example, that contracts, are ultimately negotiated documents arrived at through bargaining. As a result, they allow a degree of fine tuning, and provide fairly direct feedback to governments. Further, this instrument generally results in a product that can be evaluated by government administrators.

Federal governments in many countries use intergovernmental grants as a policy instrument. Local and state governments may be granted federal funds to conduct particular programs. The nature of the programs are often determined through a bargaining process between levels of government. The granting government may, however, have difficulty in determining whether the funds have been dispersed as agreed. Feedback becomes problematic, and may only come through a political process as citizens complain about the program.

In contrast, tax expenditures can be tracked through the tax returns filed by those concerned. Although their economic impact may not be clear, tax expenditures do provide incentives that proxies can choose to use.[5] Similarly, loans rely on incentives in order to align the goals of government and its proxies. This instrument allows government to establish eligibility requirements and criteria that proxies can choose to subject themselves to. However, as in the case of grants, it is difficult to obtain feedback on the final use and the impact of loans. Whatever feedback is obtained may come from public complaints. Kettl considers regulation to be a "hybrid strategy (p. 159). Goals and values are aligned though government commands and proxy obedience to these orders. Feedback may come from several sources, directly through government inspection, or more indirectly through elections and negotiations.

It is clear that each of the government-by-proxy instruments poses unique management problems for governments. Managers must be aware of the special characteristics of each policy instrument, and must be familiar with managerial strategies to solve the problems for securing goal alignment and feedback. Kettl argues that this requires that government managers become

leaders, capable of diagnosing and defining the situation, and determining appropriate approaches to solving the problems encountered.

## Dimensions of Policy Instruments

Like Kettl (1987), Salamon (1981) also distinguishes between direct and indirect instruments. However, because Salamon believes that "different tools of government action have their own distinctive dynamics", he incorporates four other dimensions in a classification of policy instruments, and outlines hypotheses regarding the consequences of the choice of the tool for the effectiveness of the program (p. 264).

Salamon suggests that instruments vary along a directness/indirectness dimension on the basis of the extent of their reliance on non-federal government actors, and he hypothesizes that the more indirect the form of government action, the "more difficult will be the implementation of the resulting program and the less likely will the program be to achieve its goals" (p. 267). However, because of the powerful support for local autonomy and non-interference from government, he also hypothesizes that "the more direct the form of government action, the more likely it is to encounter political opposition" (p. 268).

A second dimension defining the nature of different government instruments focuses on the extent to which they depend upon automatic, rather than administered processes. Automatic processes depend upon existing structures, and, therefore, may be more efficient, leading to the hypothesis that "the more automatic the tool of government action, the easier to manage, the fairer the operation, and the less disruptive the side effects" (p. 268). At the same time, automatic tools are less responsive, and may fail to effectively target the appropriate program benefits, leading to the hypothesis that "the more automatic the tool of government action the less certain the achievement of program purposes" (p. 269).

Salamon's third dimension is based upon a "cash versus in-kind" distinction in policy instruments. He hypothesizes that cash assistance is "easier to manage and [is ] more highly valued by recipients" than in-kind provisions, such as food stamps (p. 269). However, in-kind provisions may also generate particular political support from the producers of the good or service that is provided in-kind. For example, food stamps would be supported by agricultural and farm interests, whereas income assistance would not.

A visibility-invisibility dimension of policy instruments relates to the structure of the legislative and budgetary process. Some tools, such as tax incentives, are less visible than outright grants, and some regulatory tools will not be visible

in government budgets. Salamon hypothesizes that "the less visible a tool of government action is in the regular budget process, the less subject it will be to overall management and control" (p. 270). Therefore, invisibility is an attribute of a policy instrument that is politically attractive to "those who will benefit from it, "particularly to the more powerful who "will be more likely to receive whatever benefits they secure through less visible tools" (p. 271).

The fifth dimension specified by Salamon addresses decisions about how chosen instruments are managed. A central issue in management is the dimension of design standards versus performance standards for program control. Design standards suggest controls over "detailed aspects of program operations". such as accounting procedures (p. 271). In contrast, performance standards specify the desired outputs, but leave the design activities to the discretion of program managers, or third party agents. Recent implementation research has criticized the regulatory approach commonly adopted by federal governments for stressing design specifications, rather than performance standards. Salamon hypothesizes that "the more a form of government action uses performance standards instead of design regulations, the less cumbersome it is administratively and the more efficient is its use of resources" (p. 271). However, performance standards also encounter a number of problems when directed at pubic programs that often serve many purposes, and may depend for support from diverse political interests. Further, measurement of success or failure is often subjective, open to conflict, and generally uncertain. Salamon, therefore, also hypothesizes that "the more a tool involves reliance on federally determined performance standards, the more likely it is to encounter political opposition and resistance from its administrators. The notion that the degree of intrusiveness of a policy instrument has an impact on its acceptance, and use, has been developed by Doern and Wilson (1974), and revised by Doern and Phidd (1983), based on the work of Lowi (1964; 1970; 1972).

## Policy Instruments as Legitimate Coercion

Lowi's conceptual work on policy has been one of the most important influences on policy instrument research. Lowi (1972) differentiated between types of policies based on their degree of direct coercion, and whether they sought to control behaviour directly, or through the environment. Contrary to the prevailing view of policy, Lowi argued that policy content determined the nature of the policy process because prior experience with that policy type established expectations of a distinctive policy process derived from both the directness of the coercion involved, and from the extent to which behaviour was either

directly or environmentally controlled. Lowi initially identified three policy types: distributive policies, the least coercive, followed by regulatory policies, and redistributive policies, as the most coercive policies.

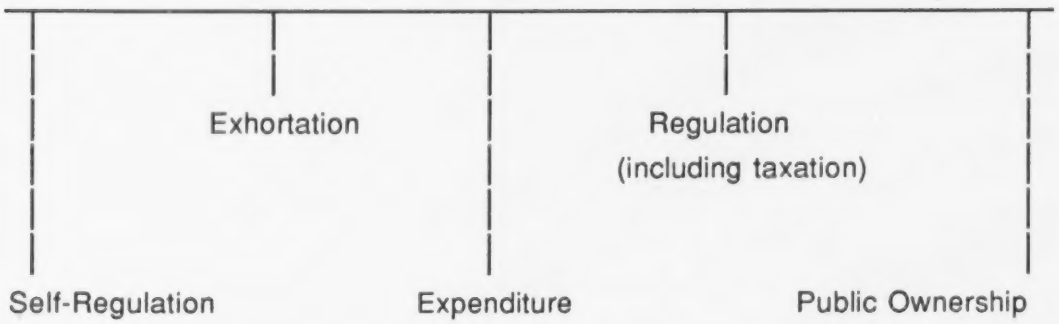
Doern and Wilson (1974) adopted the concept of "the management and manipulation of legitimate coercion" as the basis of government action. As a result, the choice of a policy or governing instrument as a means of controlling the degree of coercion applied, is not just the means of policy delivery, but is an end in itself (Doern and Phidd, 1983). Doern and Phidd argue that government instruments can be placed along a continuum extending from minimum, or essentially nonexistent, coercion to maximum coercion. Exhortation, involving efforts to gain compliance through "persuasion, discussion and voluntary approaches", entails use of the minimum of coercion (p. 111). At the coercive end of the continuum, instruments such as taxation, regulation, and public enterprise, particularly the nationalization of a company, involve "setting rules of behaviour backed up directly by the sanctions (penalties) of the state" (p.112). Although in practice nationalization is considered the most coercive of these three instruments, Doern and Phidd propose that, in theory, all three instruments can be seen as forms of regulation. They, therefore, identify only three instruments that are commonly used for policy implementation: exhortation, public expenditures , and regulation. Self-regulation, the least coercive instrument, and public ownership are also included in this typology of policy instruments. Figure 1 reproduces Doern and Phidd's schematic presentation of the range of governing instruments.

Describing the distinctive processes that surround each instrument, Doern and Wilson (1974) hypothesize that "politicians (especially the collective cabinet) have a strong tendency to respond to policy issues (any issue) by moving successively from the least coercive governing instruments to the most coercive" (p. 339). Like Salamon (1980), Doern and Phidd (1983) stress the importance of the visibility of the instrument in enabling documentation of the costs arising from the instrument's use. They also note some of the historical trends in the use of particular policy instruments. Prior to the 1970s expenditures were the predominant instruments used by governments. However, during the past twenty years taxation and regulations have become increasingly important instruments of government.

Taxation, the instrument used to raise the money that government spends, has become an important tool for governments. It is both visible and unpopular because most citizens seem to have "difficulty relating the taxes they pay to the benefits they receive" (Woodside, 1985, p. 47). Doern and Phidd (1983) classify taxation as one of the most coercive instruments.

**Figure 1**

## The Instruments of Governing




**DEGREES OF LEGITIMATE COERCION**

From: "Canadian Public Policy: Ideas, Structure, Process" by G. B. Doern and R. W. Phidd, 1983, p. 111. Copyright 1983 by Methuen Publications.

Woodside (1985) argues that tax expenditures allow authorities to disaggregate the "integrity of the tax system to provide discreet benefits for particular individuals or groups of taxpayers " (p. 47). Like Kettl (1987), Doern and Phidd (1983) document the growth of tax expenditures in Canada during the past quarter century.[6] They also suggest that because richer taxpayers are often able to take advantage of tax expenditures, or tax breaks, the net impact has been to make the tax system less progressive (p. 117).

Regulation has also become an important tool of government during the past quarter century. The increase in government use of regulation as a policy instrument is well recognized by the private sector. Governments have expanded the scope of their intervention in the business sector to the point that some researchers have noted the increasing problem of "regulatory unreasonableness" (Bardach, and Kagan, 1982).[7] Stanbury and Lermer (1983) suggest that regulation gives politicians a useful ". . . way of redistributing income/wealth in a non-obvious fashion" (p. 381). Regulation allows governments to act, and receive public recognition for their actions, without incurring costs. Doern and Phidd (1983) point out that the regulatory process, and its organizational and institutional context, are distinct from those of other instruments, such as expenditures and taxation. They note the tendency for regulatory processes to be carried out in a "disaggregated decentralized way by many ministers and officials and special agencies" (p. 306).

Exhortation, the least coercive instrument according the Doern and Phidd, has received relatively little attention by researchers. In one examination, Canadian policy scholars Stanbury and Fulton (1984), refer to the instrument as "suasion" and describe it as dependent upon ". . . deception, reversibility, redirection and the selective use of information" (p. 283). It includes government appeals to gain compliance, mass advertising, consultation and controlled leaks of information. Although it is easy to implement, and does not involve substantial costs to government, its impact is hard to determine, and may not be significant.

The emphasis on degrees of coercion, as a significant aspect of policy instruments, outlined in the preceding discussion, has gained some acceptance by policy researchers, however it remains an "unquantified and ambiguous variable" (Woodside, 1985, p. 48). Further, Doern and Wilson (1974) have been criticized for failing the make clear what causes "drive politicians along the coercion continuum in their choice of instruments" (Trebilcock, Hartle, Prichard and Dewees, 1982, p. 23). Trebilcock et. al. offer an alternative explanation of instrument choice based on public choice theory. They hypothesize that

instrument choice can be explained by three variables. First, it is influenced by legal constraints derived from the constitution and international agreements. Second, they hypothesize that rational decisions makers will choose instruments that provide benefits to marginal voters, those whose votes can be influenced, at the same time transporting the costs to "particularly committed "voters (p. 13). Finally, rational decision makers will choose instruments that provide the most visibility of benefits for those marginal voters, at the same time dispersing the costs as widely as possible. The underlying assumption is that instrument choice is determined by a rational calculation of probabilities of election, or re-election by politicians. Although this critique appears to provide a more explicit explanation of instrument choice, Woodside (1985) suggests it "implies a level of knowledge about the relationship between policy outputs and voting that is far from being achieved" (p. 45).

Although the Trebilcock et. al. (1982) treatment does address the failure of the coercion continuum to take into consideration the constituency of the instrument, the emphasis on the rational calculation in political behaviour limits the utility of the approach. Nevertheless, there are problems with classifications of policy instruments based upon the coercion continuum. The concept of degrees of coercion is based upon an implicit assumption about the nature of government, and how public policy is made. The implication of Doern and Wilson's (1974) argument that politicians will tend to choose the least coercive instrument, is that coercion is inherently undesirable, and something to be avoided. However, Woodside (1985) suggests that governments "may at times seem to revel in taking a hard line from the start depending on the constituency or group at which the policy is aimed and the nature of the problem involved" (p. 48). There is a need to explore the ways in which the status of a group influences the characteristics of the policy instruments used.

The political approach to analyzing instruments suggested by Trebilcock et. al. (1982), which views instrument choice as a function of a calculation of what key constituents would gain or lose with each alternative, offers a reflection of what occurs in practice. However, focusing on the politics of instrument choice may not assist in developing more generalizable models of instrument choice. The traditional approach to the study of instruments has been to focus on the formal properties of different instruments, in order to determine the underlying assumptions guiding each. The result is often a set of theoretical constructs. Because both the instrumental and the theoretical constructs are linked, a productive analysis would be to combine both approaches. In the following section of the paper such an analysis of policy instruments by McDonnell and Elmore (1987) is outlined.

## An Instrument Typology Linking Theoretical and Instrumental Concepts

McDonnell and Elmore have attempted to link theoretical constructs and instrumental concepts in developing their typology of policy instruments. On the basis of "existing theories of the effects of government action", and observations of the "patterns of choices of policy makers", they identify four categories of instruments: mandates, inducements, capacity building, and system changing (p. 7).

### Mandates

McDonnell and Elmore argue that mandates are based on two assumptions: first, that all individuals are expected to comply regardless of differences; and second, that the actions mandated would not otherwise occur. Mandates, which McDonnell and Elmore equate with the theories of regulation outlined in the discussion of Doern and Phidd's (1983) typology, require a degree of coercion to deal with a particular problem or issue. Compulsory school-attendance laws, and entry standards for teachers are examples of mandates. Because mandates require enforcement, they entail certain costs for government. However, mandates are also costly for the object of the enforcement . They face compliance costs, or, if they choose to avoid the mandate, they incur avoidance costs. If the costs of avoidance are lower than those for compliance, individuals and agencies may choose to avoid the mandate. For this reason mandates rarely achieve uniform compliance (McDonnell and Elmore, 1987, p. 14).

Mandates generally set minimum standards for compliance. The unintended effect is to discourage exceeding those standards. Mandates may sometimes endow particular groups with special benefits, for example, state or provincially-mandated programs benefit the handicapped. However, mandates are also often directed to benefit the larger community.

### Inducements

A second category of instruments, inducements, are less coercive than mandates. McDonnell and Elmore define inducements as a "form of procurement, in the sense that an agency is empowered to transfer money or authority to an individual or another agency in return for something of value" (p. 10). Inducements are based on the assumptions: first, that without the additional money provided by the inducement the desired change would not occur; and second, that individuals and agencies vary in their ability to produce

those changes, but that monetary inducements will enable them to do so. Inducements, therefore, use conditional grants to deal with problems that require monetary solutions. These conditional grants are often directed to support programs for a particular constituency (grants for compensatory education for disadvantaged students), or for a particular program. Inducements create costs to implementing agencies but also provide the agencies with the benefits of increased budgets and authority. The objects of the inducements also receive benefits in the form of valued programs. This emphasis on the production of value differentiates inducements from mandates, which exact compliance as a goal

However, because agencies differ in their capacity to produce the desired changes, there may be significant variation in the programs supported by the inducements. For example, some school boards may have greater capacity to provide English-as-a-Second-Language instruction than others. In addition, some boards may have different priorities. One school board may wish to supplement the grants it receives for ESL programs with its own funds, however, others may be reluctant to use the grants for the intended purposes. Mcdonnell and Elmore note that as "the range of tolerable variation narrows and the restrictions on inducements increase, the problems associated with implementation of inducements begin to look more and more like those associated with mandates" (pp. 15-16). Despite this similarity, unlike mandates, inducements use conditional grants to elicit behaviour change. However, in order for inducements to be effective, there must be a match between the priorities, preferences and capabilities of the implementing agencies, and the requirements of the program supported by the inducements.

**Capacity-Building.**

McDonnell and Elmore suggest that capacity building involves the expectation of future returns. Capacity-building instruments are based on the assumption that: first, without an immediate investment, future "material, intellectual, or human" benefits will not be forthcoming; and second, that these future returns are worth having (p. 16). Capacity-building instruments produce costs for governments and society as a whole. Benefits accrue to specific individuals in the short term, but ultimately their effect benefits future members of society. McDonnell and Elmore point out that "society's willingness to invest in intangible, immeasurable, and distant benefits may affect its future ability to respond to mandates and inducements" (p. 11). Building the capacity of an educational system through improving teacher education and research, will ultimately improve the capacity of future teachers to respond to inducements

and mandates. As a consequence capacity building may be "instrumental to mandates and inducements" (p. 11).

Capacity-building instruments are commonly adopted when there is a perceived failure of performance by particular individuals or institutions. When such perceptions reach the political agenda of governments, they are translated into policies supported by capacity-building instruments. Perceptions of America's lag in scientific expertise, generated by the Soviet satellite launches in the 1950s, led the federal government to increase support for science and math education. Recently perceptions that slightly less than half of America's teacher's will leave their jobs within the next decade are spurring federal government interest in capacity-building policies directed at teacher training and recruitment (The Holmes Group, 1986; The Carnegie Forum, 1986). [8]

Capacity-building instruments, however, produce intangible and uncertain results, which means that policy makers must justify their use by emphasizing their present utility. McDonnell and Elmore (1987) point out that capacity-building instruments are seldom as successful as inducement s "because there are basic contradictions between mobilizing material, intellectual, and human resources for future purposes and the immediate production of value" (p. 17). Policymakers , however, typically confuse the "immediate production of results and the creation of capacity for future production" (p. 17). McDonnell and Elmore argue that attempting to immediately increase the scientific capacity of a nation in order to meet foreign competition, requires instruments that operate within the present capacity of the system. Applied to education, this means that capacity building instruments will not produce immediate educational results. If a short term response is demanded, it must come from the existing capacity of the educational system.

## System-Changing

System-changing instruments change "the institutional structure by which public goods and services are delivered" (p. 11). Such instruments are based on the assumptions that: the existing institutional arrangements cannot produce the desired outcomes; and second, that changing the system will either increase efficiency, or change the nature of what is produced. System-changing instruments are commonly used to deal with unresponsiveness in the existing system. McDonnell and Elmore cite the perennial issue of educational vouchers, as an example of a potentially system-changing instrument that was intended to respond to the discontent with public schools in the U.S. by broadening the pool of potential suppliers of education, and changing their relationship with their clients.

Such system-changing policies are based on the transfer of authority, and have the effect of either broadening, or narrowing, the system. These instruments may alter the distribution of public funds. For example, a system-changing policy extending financial aid to private schools would alter the authority and funding system significantly. System-changing instruments, although attempting to address the unresponsiveness of a system, may also produce problems. Introducing private service providers into the educational system, as occurs when public support is extended to private schools, raises issues such as how they will be controlled; what performance measures they should meet, and how their cliental is to be determined.

McDonnell and Elmore's typology of policy instruments suggests that policymakers use four basic instruments when they respond to a policy problem. From their perspective policymakers can set rules, or they can conditionally transfer money, they can invest in future capacity, or they can grant or withdraw authority. The choices carry specific effects: compliance, production, capacity or authority. Table 1 illustrates McDonnell and Elmore's typology of policy instruments.

McDonnell and Elmore's typology of policy instruments, although useful, is not without problems. One of the problems with the scheme is that it contains very broad categories. Moreover, categories such as inducements, and capacity-building instruments, are not mutually exclusive. Both rely on the same basic tool, money, and both represent similar mechanisms and perform similar functions. In part, the difficulty occurs because few instruments perform only single functions (Linder and Peters,1989). One of the issues raised in constructing a typology is whether instruments should be classified by their explicit functions or their implicit ones. Capacity-building can, ultimately, be instrumental to the operation of inducements. Is it, therefore, a special case of inducements?

The danger of confusing of the functional differences with level of generality is very real in the case of governing instruments. Linder and Peters warn that often an apparent difference between instruments may stem more from "differences in the scale of their operations or in the scope of their intended results than from any basic dissimilarity in their workings" (p. 43). Instruments such as inducements, and capacity-building tools may, therefore, represent the same mechanism, with one being a special case of the other, or both representing special cases of a more inclusive instrument. For example, inducements and capacity-building instruments, may be special devices based on governments' money resources.

**Table 1** **Characteristics of Policy Instruments**

| Instrument | Primary Elements | Expected Effects | Costs | Benefits | Examples |
|---|---|---|---|---|---|
| Mandates | Rules | Compliance | Initiators: Enforcement | Specific benefits to individuals | Environmental regulation |
| | | | Targets: Compliance Avoidance | Diffuse benefits to society | Non-discrimination requirements |
| Inducements | Money (procurement) | Production of value (short-term returns) | Initiators: Production Oversight Displacement | Initiators/ producers: Increased budget authority | Grants-in-aid to governments In-kind grants to individuals |
| | | | Producers: Overhead Matching Avoidance | Clients: Value received | |
| Capacity-building benefits | Money (investment) Preservation | Enhancement competence (long-term returns) | Short-term of skill, initiating government | Short-term costs to to receiving agency long-term, diffuse benefits to society | Basic research specific |
| System-changing | Authority | Composition of public delivery system, incentive. | Loss of authority by established deliverers | Gain in authority by new deliverers | Vouchers Deinstitutional-ization New providers |

From: "Alternative Policy Instruments" by L. M. McDonnell and R. F. Elmore, 1987, Center for Policy Research in Education.

These problems are not unique to McDonnell and Elmore's (1987) typology, but, rather, reflect the difficulties in developing a set of generic instruments. In fact, most attempts to compile a list of basic policy instruments have run into similar difficulties. Nevertheless, some attempts have been made to identify links between specific devices and general instrument classes. One of the more elaborate, and comprehensive, analyses of government instruments has recently been offered by Christopher C. Hood (1983). Because of its level of generality, Hood's typology can, moreover, form the basis of a synthesis of policy instruments, such as those suggested by Doern and Phidd and McDonnell and Elmore. In the following discussion such a synthesis is developed.[9]

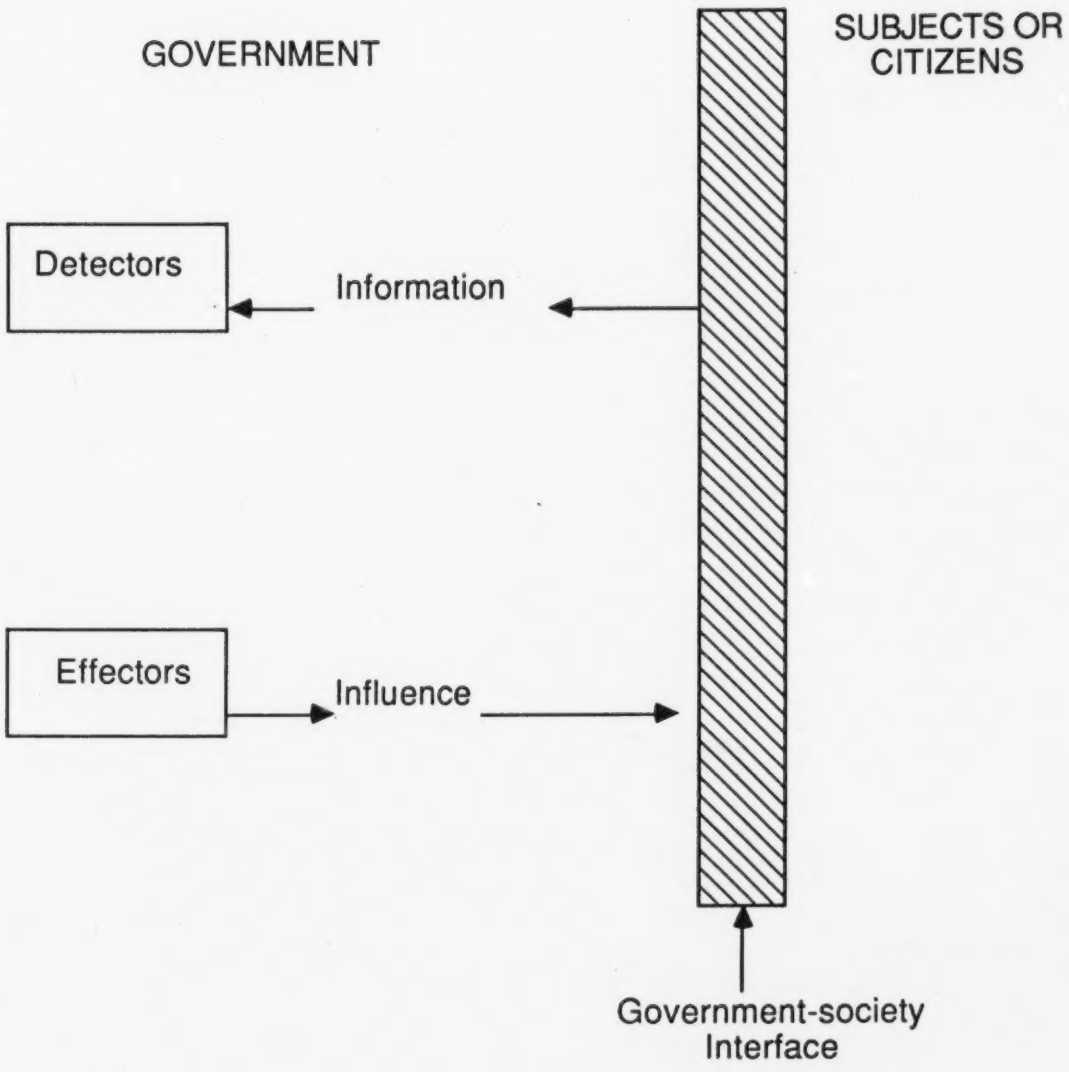
## A Cybernetic Conception of Policy Instruments

Unlike Doern and Phidd (1983), who base their typology on the concept of legitimate coercion, Hood (1983) adopts two concepts, detectors and effectors, from cybernetics, the science of general control systems, as the organizing principles for his typology of policy instruments. Detectors and effectors are the two "essential capabilities that any system of control must possess at the point where it comes into contact with the world outside" (p. 3). Governments require detectors in order to obtain information from the external world. They also require effectors in order to take action on the basis of the knowledge obtained. Figure 2 illustrates this cybernetic system.

Hood proposes governments possess a set of four basic resources that can be used for detecting and effecting by governments. They are "nodality", "treasure", "authority", and "organization", represented by the acronym NATO (pp. 4-6). Nodality is the "property of being in the middle of an information or social network" (p. 4). Governments are nodal by virtue of their "figure head role", and because they are often central repositories for information. Nodality, therefore, places government in a strategic position to dispense and receive information. It is the least coercive of the tools because it relies on voluntary action and compliance. Hood notes that nodality is limited by the credibility of the government, and how much it is willing to spend on this resource (p.6). Governments possess treasure in the form of stock of money, or what Rose and Peters (1978) call "fungible chattels" (p. 4). Treasure includes not only actual cash, but anything with money-like properties. This check-book instrument allows governments to influence and control its external context. Authority, the defining property of government, arises from its legal powers to "demand, forbid, guarantee, adjudicate" (p. 5). It is limited by legal standing.

**Figure 2**

**Government Detectors and Effectors**




From: "The Tools of Government" by C. C. Hood, 1983, p. 3. Copyright 1983 by C. C. Hood, The Macmillan Press Ltd. .

Finally, organization denotes "the possession of a stock of people with whatever skills they may have (soldiers, workers, bureaucrats), land, buildings, materials and equipment" (p. 6). Organization, enabling governments to act directly rather than through third parties, is limited by capacity. Figure 3 illustrates Hood's eight basic types of government tools.

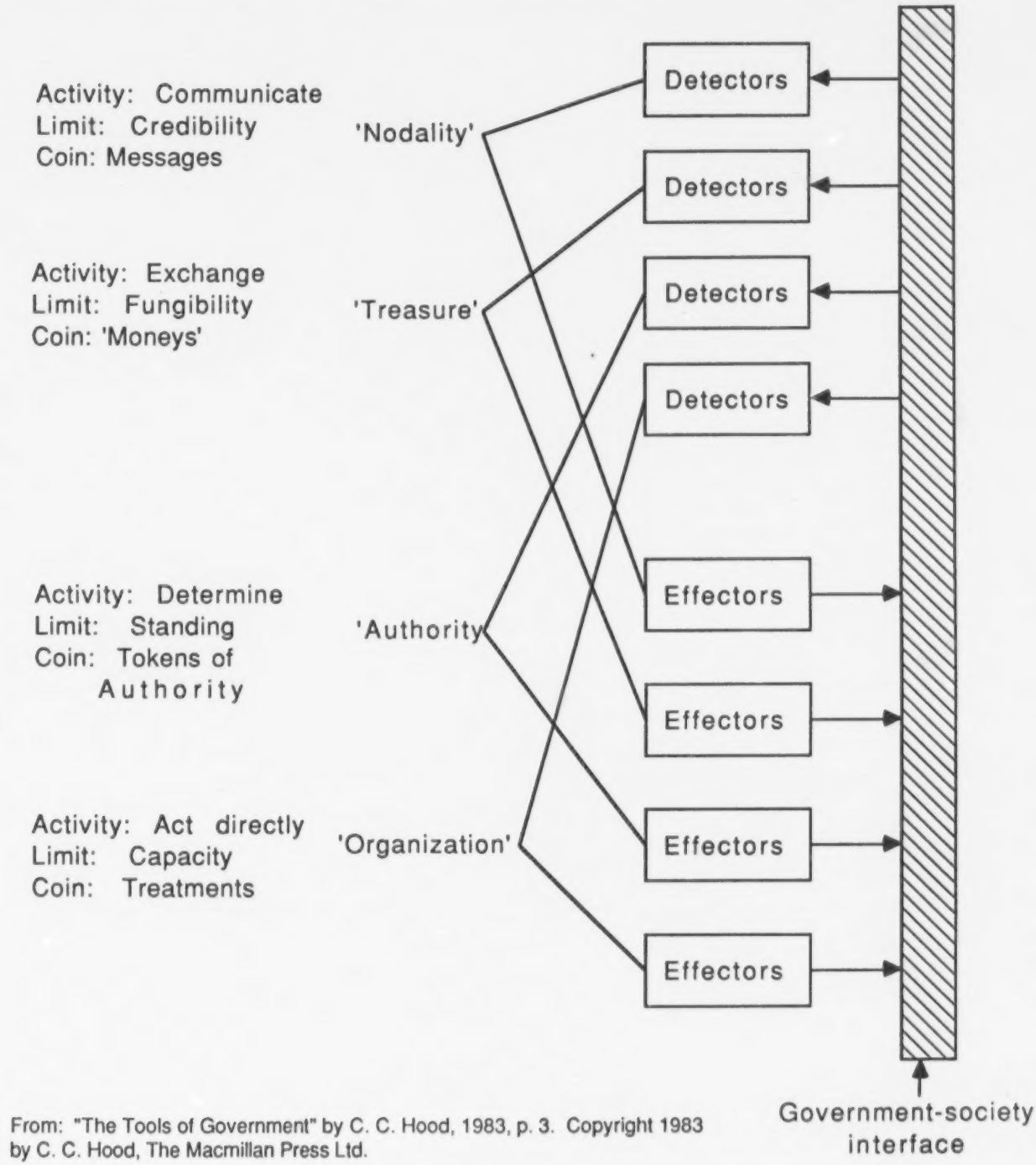
Hood (1983) notes that each of these resources can be used as both effectors, and as a detectors. It is possible for government to detect trends by obtaining information because of its nodality, to buy it, to demand it, or to extract it directly. It is also possible for governments to effect policy by transmitting information, by spending money, through its authority, or by organization. Like Doern and Phidd (1983), Hood (1983) also hypothesizes an increasing degree of coercion inherent in the instrument use as governments move from using nodality to using organization:

> In very simple terms it could be said that 'nodality' works on your knowledge and attitudes, 'treasure' on your bank balance, 'authority' on your rights, status and duties, and 'organization' on your physical environment or even on your person. (p. 7)

## Synthesizing Categories of Policy Instruments

Although Hood's typology distinguishes between detecting and effecting, and tends to take a more general focus, his categories of nodality, treasure and authority are synonymous with Doern and Phidd's (1983) instrument categories of exhortation, expenditure, and regulation. It is, therefore, possible to combine both approaches for a "more complete and detailed catalogue of governing instruments" (Pal, 1987, p. 145). Pal has undertaken such a synthesis, adopting Hood's four major types of government resource as the main categories of a typology of policy instruments. He identifies a number of specific devices within each category, and further distinguishes whether they are detectors or effectors. Incorporating Doern and Phidd's (1983) concepts, Pal (1987) also organizes these instruments along a coercion continuum. Figure 4 reproduces this synthesized policy instruments and devices typology. The following section briefly outlines the characteristics of each instrument.

**Figure 3** **Eight Basic Types of Government Tools**




From: "The Tools of Government" by C. C. Hood, 1983, p. 3. Copyright 1983 by C. C. Hood, The Macmillan Press Ltd.

**Figure 4**

**Policy Instruments and Devices**

| | RESOURCES | | | |
|---|---|---|---|---|
| | NODALITY | TREASURE | AUTHORITY | ORGANIZATION |
| EFFECTORS | Query Response | Grant | Public Recognition<br>• recognition<br>• enablement | Direct Provision<br>Public Corporation |
| | Dissemination<br>• targeted<br>•broadcast | Subsidy<br>• direct<br>• levered | • constraint | Joint Private/<br>Public |
| | | | Self-regulation | |
| | Exhortation<br>• prompt<br>• suasion<br>• guidelines | Mandated Purchase orientation:<br>• government<br>• supplier<br>• consumer | Sanctions<br>• suspensions<br>• levy<br>• detention/imprisonment | |
| | Consult | | | |
| DETECTORS | Unsolicited | Reward<br>Purchase | Display<br>Notify | Turnstiles<br>Scanners |
| | Direct Inquiry<br>• survey<br>• ad hoc commission<br>• permanent commissions | | Returns<br>Interrogate<br>Inspect | • fixed<br>• mobile |
| MINIMUM | | COERCION | | MAXIMUM |

From: "Governing Instruments" by L. Pal, 1987, Public policy analysis: An introduction. p. 147. Copyright by Methuen.

**Nodality.**

In Pal's inventory of governing instruments nodality involves the idea that "government dispenses and collects information simply by virtue of being in the middle of a social network" (p. 147). It relies on passive methods of obtaining and disseminating information. Its effectiveness as a policy tool depends upon the extent of voluntary compliance by the subjects of the intervention. Pal suggests that one means of effecting policy involves a "query response" of simply "sitting still, like a spider in the centre of a web of information, and responding to queries as they come" (p. 148). This essentially passive instrument requires citizens to actively seek out information.[10] Dissemination is a less passive form of effector, where the government actively reaches out to a constituency with information. Targeted dissemination directs this information at specific groups, whereas broadcast dissemination is aimed at all citizens. [11] Exhortation is a less passive instrument that governments use to directly and actively change social behaviour, without, however, any incentives. Exhortations can come in the form of "directives, injunctions, promptings, guides, and advertisements" (p. 149). Prompts are often aimed at repetitive behaviours such as income tax forms. Suasion "seeks to alter beliefs and perceptions through the use of logical or emotional appeals unsupported by rewards or sanctions" (p. 149). Advertisements directed at teenagers to finish high school are examples of suasion. Guidelines involve more explicit attempts by government to set standards of behaviour without sanctions.

The final effecting nodality instrument identified by Pal is consultation. This instrument can, in fact, be viewed as both and effector and a detector because information generally flows in two ways. Consultation can also be a tool governments use to try to persuade selected groups to agree with a particular policy. It differs from negotiation, where rewards and sanctions may be used to gain formal agreements.

There are also a number of nodality detectors which can be categorized as either unsolicited or direct inquiry. Unsolicited information comes to government in many forms ranging from letters written to politicians from their constituents, to tips sent to the police. In contrast, direct inquiry is a more organized method of obtaining information. Surveys, ad hoc commissions of inquiry, and permanent commissions are common direct inquiry devices that do not rely on rewards or sanctions.[12]

**Treasure**

Treasure, according to Hood (1983), allows government to "exchange, to buy favours, to court popularity, to hire mercenaries" (p. 40). Government use of

money is a common and powerful policy tool. Used as a detecting instrument treasure involves the purchase of information, often in the form of expert policy advice. Treasure can also be used as an effector through devices such as grants, subsidies and purchases. Grants, are "expenditures made in support of some end worthy in itself"(Pal, 1987, p. 152). Grants, such as graduate scholarships, may reflect rewards for scholarship, but may also have the effect of reducing the cost of an education. Often qualifying conditions must be met, and minimum standards maintained, however monitoring is generally not significant.

Pal defines subsidies as "expenditures made to defray the costs of some activity which serves as a means of achieving a desired public end" (p. 152). Subsidies generally require that more exacting conditions be met, and they are generally more directly related to performance than are grants. However, they do not reflect the same degree of "worthiness" that grants suggest. Although subsidies to industry may be intended to support some worthy end, there is an assumption that the subsidy is temporary. In practice, however, they often become permanent features of a domain.[13] Grants and subsidies, generally with few strings attached, are given without an expectation of a monetary return to the government.

Governments also use treasure to directly purchase goods and services. Mandated purchases occur when governments buy something based on some characteristic of the commodity, for example the quality of being manufactured in Canada. Pal identifies three types of mandated purchase devices. Government-oriented purchases allow governments to purchase on the open market in order to reduce their costs. Supplier-oriented purchases, in contrast, occur when the government agrees to purchase from a particular group of suppliers in order to support an industry that might otherwise not be able to survive. Consumer-oriented purchases by government are driven by the needs of the consumer. In order to meet these needs governments at many levels now commonly "contract out" services to the private sector. Contracting can take several forms. Governments can directly contract for the services of a private company for a set fee paid by the government to the company. Governments can also allow companies to operate in a certain domain, for example, child care, and then partially pay for services on behalf of particular consumers. Finally, governments can provide consumers with vouchers, which can be used in exchange for service from private companies. Vouchers are then submitted to the government for payment.

## Authority

Legal authority allows governments to "command, prohibit, commend and permit, through recognized procedures and identifying symbols" (Hood, 1983, p. 54). To be effective it must be seen as legitimate, although sometimes it must also be backed by power, or the ability to apply sanctions. Hood explains the concept of authority by noting that governments spend their resource of authority in the form of tokens of authority such as orders, announcements, licences, and so on. Instruments of authority are more coercive than are instruments of nodality and treasure. They are particularly appealing because they are relatively inexpensive, and can be effective. Pal (1987) identifies three categories of authority instruments that can be used as effectors: public regulation, self-regulation and sanctions.

Public regulation can be administered either directly, or it can be delegated to a specially created body. There are three common types of public regulation: recognition, enablement, and constraint. Recognition, the least coercive, confers public recognition. High school certificates are an example of government recognition. Enablement is more coercive because it relies more on sanctions. Licences, for example, give permission or permit certain activities. Licences are widely used by all three levels of government for a broad range of activities, and have the advantage of being able to have conditions attached. Enablements can also be used to limit the number of participants in the field (Pal, 1987, p. 160). Constraints are even more coercive policy instruments because they "positively demand or prohibit an activity" (Hood, 1983, p. 60). Constraints take a variety of forms from very specific orders targeting specific groups, to "blanketed tokens" that apply to everyone. The most important of the blanket regulations is the demand for taxes by government. Because this demand is made on private property and wealth, it is also viewed as the most coercive expression of the state's power (Pal, 1987, p. 161). An even more coercive prohibition is expressed in criminal law, however, other prohibitions such as health and safety standards, also rely on coercion.

Self regulation is one common instrument of authority. It occurs when governments delegate their regulatory authority to some other group. Often that group monitors its own affairs, and, thereby, fulfills the public interest. Professions such as engineering, law, and medicine, are examples of self-regulating organizations, however, other bodies, such as produce-marketing boards, and standards associations, are less well known examples.

The instrument of authority that underlies all others in this category is the sanction. Commonly, governments rely on three types of sanctions: suspensions, levies, and physical punishment. Suspensions imply the

withdrawal of some privilege, such as membership in a profession, or loss of official certification. Levies can take the form of fines, confiscations, or re-possessions. The most coercive of these instruments , physical punishment, is illustrated in a government's use of imprisonment and detention.

Instruments of authority can also be used as detectors. Hood (1983) identifies five different detecting devices based on authority including: obligations to display, to notify, and to file returns, as well as the use of interrogation and inspection. All of the instruments compel the provision of information. Obligations to display, such as identity cards, are less coercive, and are relatively passive instruments. Students commonly must display identity cards issued by their high school confirming their student status. Slightly more coercive are obligations to notify, such as the requirement to notify governments of births and deaths. Ministry of Education requirements to report annual daily attendance are based on this principle. Interrogation and inspection are the most active authority-based instruments of detection (Pal, 1983, p. 163). In this case, governments directly assume responsibility for gathering information. Perhaps the most infamous example in education were the visits by school inspectors that were common until recently.

**Organization.**

There are some overlaps between organization and other resources of government, such as nodality, treasure, and authority, however, it is distinguished from from these resources because it is based on direct government action or intervention. Organization includes the resources governments have "in their stocks of land, buildings and equipment, and personnel (p. 163).

There are two instruments that use organization: direct provision and public corporation. Direct provision involves government supply of public goods and services. The provision is administered and accountable to line authorities who are ultimately accountable to elected officials. Governments, for the most part, use their organization resource through direct provision of educational services to the public. Teachers are accountable to principals, who in turn are responsible to superintendents, who in turn are accountable to boards of trustees.

Governments can also engage in activities through agencies that are "quasi-autonomous from the executive and legislature" (p. 164). This form of public enterprise has, in the past, been a favoured instrument of the Canadian government. The Canadian Broadcasting Corporation, Air Canada and VIA rail were examples that have recently undergone substantial revision under the

federal Conservative government. This instrument allows governments to provide goods and services that are administered at arms length, often in order to recognize the demands for local autonomy. On the basis of this definition, Pal suggests that school boards, which "are provincially incorporated bodies with their own taxing powers", can be viewed as public corporations.

The key feature of instruments of detection based on organization is that they "gather information without the knowledge of informants (p. 164). Hood (1983) identifies two types of organization-based detectors: turnstiles and scanners. Turnstiles are the most passive instrument of involuntary information gathering. They involve placing a detector "in such a way that it is difficult to avoid going past or through it" (p. 103). Examples, such as immigration checks at airports, and hidden cameras in banks and commercial buildings, are not commonly found in schools. Fixed scanners are more active forms of detection that can be seen in the example of the watch tower of prisons. Mobile scanners involve government forces moving around in order to conduct involuntary surveillance. Examples include satellite surveillance for defence purposes, and helicopter detection of potential rioters in crowds. Governments also resort to hidden scanners, such as secret recorders and telephone taps. The type of involuntary detectors described here are not commonly found in the educational domain, however, in other spheres such devices have become more common, and more technologically sophisticated.

## Assessing the Instrument Inventories

The inventories of policy instruments just discussed give some indication of the variety of approaches that have been taken to classifying the instruments governments use in policy making. There are clearly a number of deficiencies in the typologies that have been developed (Linder and Peters, 1988; Pal, 1987). Some of the typologies use extremely broad categories, that are not necessarily mutually exclusive (for example Hood, 1984; McDonnell and Elmore, 1987). Clear distinctions between instruments are difficult to make, moreover, most public policies do not depend upon a single instrument.[14] Some policies may initially use one or two primary instruments, but over time, as the policy context changes, or as specific technologies change, other instruments may be added.

The replacement of policy instruments over time in reaction to the dilemmas created by unwanted or unanticipated side effects, has become the focus of an emerging concern with the phenomenon of policy succession (Peters and Hogwood, 1980).[15] Governments, faced with such dilemmas, will attempt to design new packages of instruments to apply to areas where the original

instruments no longer seem to fulfill the desired purpose. Related to this concern is the more fundamental issue of what variables influence the choice of policy instruments by decision makers and their policy advisors as part of the policy design process. This issue is the focus of the next section of the paper.

## Choosing the Instruments

The third question framing this paper asks what variables influence the choice of policy instruments. One of the primary sets of factors are the attributes of the instruments themselves. A second set of factors are related to the context within which the assessments of the instruments occur. The actual process of choice by particular decision makers is also influenced by a third set of endogenous factors related to roles and cognitive factors such as ideology and values. The following discussion examines each of these three sets of factors by first considering the attributes of different policy instruments. Next, the salient dimensions of the context of instrument choice are considered. Finally, endogenous factors influencing instrument choice are outlined.

### Attributes of Instruments

The inventories of policy tools outlined in the preceding section of the paper suggest that policy makers have a variety of instruments from which to choose when designing policies. These typologies also suggest some of the basic attributes of policy instruments and the trade-offs that are implied in their choice. Linder and Peters (1989) find four general categories reflected in these tradeoffs. First is the resource intensiveness of the policy, including the administrative costs involved, and the operational simplicity of the instrument. Salamon (1981), concentrating on the tradeoff between administrative costs and political support, suggests that the same characteristics that make an instrument easy to manage also makes it the focus of political opposition.

A second category of trade-offs focuses on the targeting capacity of the instrument, that is its precision and selectivity. Hood (1984) suggests that tools that are both accurate and easy to control are also less intrusive, but resource intensive. Three central trade-offs are suggested by Linder and Peters (1989): first, the "higher the precision of the instrument, the less intrusive it is likely to be; second, the less intrusive it is the less likely it is to arouse public opposition; and third, the higher the instrument's precision, the more complex and costly it is to administer (p. 46).

The third category of trade-offs identified by Linder and Peters focuses on the constraint implied by the instrument, including its coerciveness, and the underlying ideological principles limiting government activity. The focus on the

constraint of an instrument is related to its degree of coerciveness. Conceptualizing policy instruments along a continuum of coercion forms an ordering of "steadily increasing burdens of proof and persuasion associated with the expansion of governments' role in private activities" (Linder and Peters, 1989, p. 46). Doern and Phidd (1983) argue that policymakers will choose the least coercive instrument first, and move gradually to the most coercive. The centrality-of-coercion hypothesis has been criticized by public choice theorists who argue that instrument choice is a function of the self-interested decision makers rational calculations to determine which instrument will likely produce the greatest political support.[16]

A fourth category of trade-offs focuses on the political risk of the instrument, in terms of its public visibility, and the support and opposition it engenders. Salamon (1981) notes that the less visible an instrument is, the more politically attractive it will be to those receiving its benefits because it will be less subject to scrutiny, and government management and control. Linder and Peters (1989) suggest that the bluntness of the instrument may make it more visible, but at the same time may increase the potential for political opposition to be raised. However, sharpening, or making an instrument more precise, entails an increase in costs.

The resource-intensiveness and the political risk attributes of instruments just outlined, are related to the internal and external aspects of the political feasibility of the instrument. Targeting is concerned with the technical feasibility of the instrument. Constraints, implied by the degree of coerciveness of the instrument, relates to decision makers' fundamental beliefs about "what is ideologically acceptable, over and above considerations of quality and costs" (Linder and Peters, 1989, p. 48). The attributes of instruments derived from these categories of trade-offs appear to be fairly durable and persistent. However, the relative influence of the technical versus the political feasibility of the instrument on decision makers' choices of instruments, is open to question.

A great deal of discussion in public policy focuses on question of technical feasibility or efficiency, which involves the best way to achieve broadly agreed upon goals. Hood (1983), for example, refers to the issue of the technical efficiency of an instrument when he suggests that "the larger the target population is "the more government is likely to switch the balance of emphasis from active to passive instruments or from particular to general ones" (p. 138. However, most authors do not believe that the technical efficiency of an instrument plays a key role in its choice. Doern and Phidd (1983), for example, point out that the Canadian literature of on policy instruments agrees that the choice of instruments is not a matter of technical efficiency. Political efficiency is

considered to be more important (Pal, 1987). Political efficiency is a salient factor because instruments often have a "long term impact on the pattern of politics in a particular area of policy" (Woodside, 1985, p. 51). Because particular policy processes are also associated with certain instruments, they often define who benefits, and to what extent.

Political efficiency, or feasibility, relates to the underlying ideological basis of governments' choice of instruments. It is clear that political parties in power will act on the basis of rational self-interest, and make non-ideologically based instrument choices. It is also well recognized that parties and governments retain ideologically-based preferences for particular policy instruments. Recent ideologically conservative governments in the Britain, the U. S. and in Canada have, for example, favored market mechanisms for the delivery of services (Pal, 1987). Figure 5 illustrates attributes of instruments that provide criteria for policy design.

## The Context of Policy Choice

The influence of policy context on the course of events in policy making, and on the outcomes, is emphasized by most policy scholars, and particularly by those taking a policy design perspective (Linder and Peters, 1989; Schneider and Ingram, 1989). A variety of contextual factors contributing to variability in policy choice have been proposed. Linder and Peters (1989), for example, categorize these contextual factors as systemic, organizational, and related to the nature of the policy problem being addressed.

### The Systemic Context

The systemic context of the policy system includes the elements of the national policy style that influence the perception and choice of policy instruments across domains (p. 49). One of these elements, the political culture of the nation, will determine the acceptability of government intervention in the economy and society. Linder and Peters hypothesize that countries, such as Germany, Denmark and Sweden, with a "statist" political culture supporting such interventions, will accept more intrusive policy instruments more readily than those with a less statist tradition (p. 49). Contrary to Doern and Phidd's (1983) centrality-of-coercion hypothesis, Linder and Peters (1989) propose that such countries will also tolerate a greater degree of coercion in policy instruments.

**Figure 5**

**DESIGN CRITERIA**

| ATTRIBUTES OF INSTRUMENTS | RANGE OF VARIATION |
|---|---|
| Complexity of Operation | Low——————High |
| Level of Public Visibility | Low——————High |
| Adaptability Across Uses | Low——————High |
| Level of Intrusiveness | Low——————High |
| Relative Costliness | Low——————High |
| Reliance on Market | Mostly Market——————Mostly Government |
| Chances of Failure | Small——————Large |
| Precision of Targeting | Low——————High |

From: "Instruments of Government" by S. H. Linder and B. G. Peters, 1989, *Journal of Public Policy*, *9* (1), p. 56.

Other factors forming part of the systemic context are are related to the social cleavages based on language, religion, and region, that have "substantial political salience" (p. 50). In the presence of such cleavages governments may prefer to use less visible instruments in order that competing groups not be inflamed. Linder and Peters also hypothesize that in less homogeneous societies, governments may be forced to use more coercive instruments than would be required in well-integrated societies.

## The Organizational Context

The nature of particular organizations operating within the public sector also influences the choice of instruments. It is now recognized that organizations have cultures, and an institutional memory, that influence perceptions of particular policy instruments. Linder and Peters (1989) argue that this institutional context predisposes organizations "toward some instruments and against others" (p. 51). Further, research suggests that the period of time in which the organization was formed influences its predisposition toward particular instruments. For example, public sector organizations formed during periods of economic expansion may tend to favour expenditure-based instruments. The nature of the population served by the organization also influences the types of instruments chosen. For example, organizations serving disadvantaged may tend to use cash grants or in-kind transfers. The policy community in which the organization operates is another influence on the type of instruments chosen. The literature on policy communities (Heclo, 1978; Sabatier, 1987; 1988; Sabatier and Pelkey, 1987) indicates that they have a significant influence on policy making.

## The Nature of the Problem

The nature of the problem being addressed is a third contextual factor influencing variability in instrument selection. The definition of a problem is closely linked to the choice of instruments because it "creates or defines certain activities as solutions" (Drey, 1984, p. 6). Problem definition, as an essential step in problem solving, has long been considered central in policy literature (Lasswell, 1951; Dror; 1971; Dye, 1975; Nagel, 1980). It is, however, clear that problem definition is far from easy in the real world because the problems confronted by policy makers are often perceived to be complex, or "wicked" (Mason and Mirtroff, 1981). Nevertheless, those adopting a policy design perspective suggest some attributes of policy problems can be identified, which can provide a useful basis for designing interventions. Linder and Peters (1989) include among these attributes, scale, collective consumption goods,

certainty, predictability and independence. The scale of a policy problem influences the nature of the interventions that will be useful. Similarly, problems related to collective consumption goods have a number of features which influence the way they can be most effectively treated. The certainty and predictability of particular problems also influence the choice of appropriate instruments. Finally, policy makers must consider the interdependence of a particular policy problem with other problems. Its degree of independence will influence the instruments chosen.

Although the recognition of the common attributes of policy problems may assist policy makers in choosing policy instruments, it is also clear that problems are not objective entities in themselves. The developing literature on problem definition generally agrees that problems are not objective entities, to be detected, but rather they are the product of "imposing certain frames of reference on reality" (Drey, 1984, p. 4). Ackoff (1978) notes that "in dealing with a problematic situation, a decision-maker must develop a concept -a representation or a model- of it. He (sic) attempts to solve the problem as he (sic) conceives it. Thus if his (sic) conception is wrong, the solution to the problem as conceived may not solve the problem as it exists" (p. 13).

The subjectivity of problem definition, and instrument choice points to the centrality of decision-makers' conceptualizations of policy problems, and of their perceptions of the policy instruments. That a problem cannot be easily separated from the perception of it, anticipates the importance of the endogenous influences on policy choice discussed next.

## Endogenous Influences on Instrument Choice

A third set of endogenous factors influencing instrument choice are related to the influences on individual decision makers. Linder and Peters (1989) argue that the background and training of decision makers will influence the the types of instruments they favour. The professional socialization received by policy makers impacts on their perception of appropriate instruments. Lawyers, for example, because of their familiarity may first think of legal instruments, such as procedural guidelines. Economists, may, in contrast, consider expenditures, or other incentive-based instruments, most appropriate. Moreover, the patterns of recruitment favoring lawyers and economists in public service policy positions may result in a general bias toward certain types of instruments and different standards of assessment.

Although background training, and the particular professional roles played by policy makers, have an impact on their choice of instruments, a number of underlying cognitive factors are particularly significant influences on these

choices. In fact, perhaps the most sophisticated theories related to policy design are found in the work of Simon (1981; 1985), and in the decision research conducted by Kahneman, Slovic and Tversky (1982). Simon (1981) argues that the kind of problem solving that occurs when instruments are chosen involves searches through large stores of information using decision heuristics, or rules of thumb, to guide the search. Further, what appears as intuition is actually a process of recognition of similarities between the current problem and other information in the memory. Kahneman, Slovic and Tversky (1982) have identified several types of decision heuristics including availability, simulation, and anchoring. They have also developed a number of concepts suggesting the biases introduced by these heuristics.

The heuristic, "availability", occurs when people "assess the frequency of a class or the probability of an event by the ease with which instances or occurrences can be brought to mind" (p. 11). Biases are introduced by this heuristic because the events that come to mind are generally the most recent, those that are more numerous, more dynamic or colourful, or more consistent with existing biases. Schneider and Ingram (1989) suggest that such "recall biases" may result in an "inferior set of policy alternatives since (sic) alternatives that are more effective or more appropriate may not be the most dramatic, most common, or the most consistent with existing biases" (p. 65).

"Simulation", another heuristic identified by Kahneman, Slovic and Tversky (1982), is based on the perception that people do not just recall information from memory, but rather they construct, or simulate, something new. Applied to policy design, individuals may draw several analogous policies from memory, combine them "cafeteria-style", and then anticipate their effects on the desired goal (Schneider and Ingram, 1989, p. 65). The individual may also work backwards from desired ends to available program examples. However, the extent to which simulation produces appropriate policies depends on the ideas that individuals can generate, and the causal theories they have available.

A third heuristic identified by Kahneman, Slovic and Tversky (1982), "anchoring", occurs when individuals focus on an initial starting point, and revise their thinking incrementally as they proceed. Incremental policy change is one result. However, this heuristic also operates in cases of innovation. In the case of innovation other policies, or instruments, may be chosen as an anchor. These policy designs are then constrained by the nature of the initial anchor.

Some of the biases suggested by these decision heuristics are described in May's (1981) discussion of the limitations to policy design introduced by misconception about policy problems. May argues that two of the most

prevalent misconceptions about problems are that "problems define solutions", and that "a best alternative exists" (p. 229). May suggests that the risk of defining the problem before thinking of all possible actions introduces the need for several shortcuts. One shortcut is to recast the problem into a familiar generic mode. However, problems do not typically fall into neat categories. As a result, classifying problems introduces the risk of ignoring key dimensions, and ultimately of misclassifying them. Another short cut involves adopting a "pat set of policy alternatives" that may initially appear sound, but may not address the particular problem being considered (p. 231). Stock solutions, moreover, tend to address symptoms of problems not their causes.

The view that a single best alternative exists also encourages short cuts that may constrain policy design. Despite the recognition that public policy problems are generally complex and conflictual, policy makers often act as if a "clearly superior alternative exists for addressing a problem" (p. 233). May suggests that this results in some dangerous shortcuts, such as "dummying-up alternatives" (p. 233). This occurs when a single policy alternative is thought to be best, but alternatives are also presented, generally in an unfavourable light, to give the appearance of a critical analysis. Comparing straw men does not, ultimately, inform good policy design. Another short cut created by the "single best alternative bias" involves attempting to do everything at once in a single policy. Given the conflicting goals that drive most public policy formulation, a single, do-everything, policy is clearly impossible.

## Choosing Instruments In Context

To recap this section of the paper, it has been argued that external factors, including the systemic, and the organizational context, as well as the nature of the problem being considered, influence the selection of policy instruments. As well, endogenous factors, related to the backgrounds and roles of the policy makers, influence variation in instrument selection. Finally, a number of cognitive factors have been outlined that influence problem solving in policy making. Figure 6 reproduces Linder and Peters (1989) tentative list of causes of variation in choice of policy instruments.

**Figure 6** **Causes of Variation in choice of Policy Instruments**

| EXOGENOUS FACTORS | | | ENDOGENOUS FACTORS |
|---|---|---|---|
| CONTEXT AS SETTING | | CONTEXT AS PROBLEM | |
| Systemic Variables (Macro) | Organizational Variables (Meso) | Problem-Specific Variables (Meso) | Individual Variables (Micro) |
| National Policy Style<br>Political Culture (Statism)<br>Social Cleavages | Organizational Culture<br>• pattern of recruitment<br>• period of establishment<br>• pattern of socialization<br>External Contacts<br>•policy communities<br>•clientele | Policy Domain<br>• crowding<br>• scale<br>Requirements<br>• symbolic<br>• functional<br>• support<br>Constraints<br>• existing commitments<br>• resource limitations | Background<br>Roles<br>• professional<br>• institutional<br>Cognitive Factors<br>• perceptions<br>• ideology<br>• values and criteria |

From: "Instruments of Government" by S. H. Linder and B. G. Peters, 1989, Journal of Public Policy, 9 (1), p. 50.

It has been suggested that individuals generally reason by analogies, searching through stores of information using decision heuristics to simplify the process. Schneider and Ingram (1989) note that whether this process produces the best results depends upon:

> the range of ideas that occur to the decision makers, the similarity of context between the sources from which the ideas were drawn and the one at hand, as well as the efficacy of the ideas themselves once they are translated into policy alternatives. All of these, in turn, depend heavily upon the previous experiences of persons involved in the policy formulation process and upon the quality and quantity of information available to them. (p. 66).

These conditions confirm the utility of incorporating systematic search and design methods into the policy making process (Alexander, 1982). One such systematic approach, outlined by Schneider and Ingram (1989), is suggested in the next section of this paper.

**Improving Policy Design: Analyzing the Structural Logic of Policies**

Policy design proponents argue that policy making can be improved through understanding the biases introduced by decision heuristics, and the context of the policy. Drawing from the examples of other policies in other contexts can provide policy makers with useful models for designs. Techniques for the comparative analysis of policies are required in order to provide a broader array of policy examples. Schneider and Ingram (1989) suggest that such techniques require a systematic analysis of the underlying structural logic of policy examples in order to clarify the assumptions upon which the policies rest. Understanding these assumptions will allow policy makers to assess the applicability of the policy design to the problem in question. Schneider and Ingram propose one such a technique for "systematically pinching ideas" based on identifying the basic elements of policy designs, and clarifying the underlying structural logic contained in the patterns in which these elements occur.

Schneider and Ingram include among the basic components of policy designs their goals, agents, targets, and the linkages among these elements. Linkages include "policy tools, rules specifying the decisions and behavior that are consistent with policy purposes, and assumptions or theories why or how the tools will produce the desired results" (p. 68). Analysts can systematically decompose potential policy examples into these component elements, and identify the patterns of relationship among the elements. The patterns of these elements found in policy examples describe the underlying structural logic of the policy design.

Goals may be found in written documents, or may be determined through interviews or inferred from analysis. Policies often pursue inconsistent , and competing goals. Understanding the structure of these goals may suggest ways of balancing interests and values.

Target populations are those groups whose "decisions and behaviours are related to policy goals directly or indirectly" (p. 70). Some targets are explicit, others must be inferred through analysis of the policy, and the context in which it operates. Policies may define targets by rules, or formulas, or may give broad definitions. Targets may be self-selected, or voluntary. Eligibility rules may be specific, or may be vague and left to the discretion of steet-level agents. Criteria for definition of targets are related to underlying principles of "equality, need, equity (merit), effort expended, potential contribution to solving the problems " (p. 71).

Agents are those officials who are given the responsibility for the policy. Ingraham (1987) notes that the locus of control, that is, the level of government responsible for design and implementation decisions;,and the level of control, or the amount of discretion permitted, are important dimensions of this key element of policy design. Agents may include private organizations as well as government agencies.

Linkage mechanisms, the fourth component of policy design identified by Schneider and Ingram (1989), contain three types of assumptions: technical, normative, and behavioral, as well as the policy tools to be used, and the rules that are to be specified. Technical assumptions connect the behavior of targets to technical goals. For example, if students are required to read daily, then national literacy will improve. Normative assumptions connect the behavior of the target with some value judgements. For example, education should be improved so students can live richer lives. Behavioral assumptions embedded in policies relate policy tools to the behavior of agents or targets. If teachers receive inservice training, then their capacity to teach will improve.

Schneider and Ingram (1989) also include among the linkage mechanisms, policy tools and rules. Specific policy instruments, such as those previously discussed in this paper, are often identified in policy designs. Policy analysts must be familiar with the types of instruments and their characteristics. They also need criteria with which to assess the utility of the various tools. One set of appraisal criteria has been developed by Linder and Peters (1984) based on a checklist for evaluating the utility of policy models developed by Hall (1975). The checklist suggests some of the questions that could be asked when policy makers begin to select the instruments to be used. See Table 2.

**Table 2** **Rudimentary Appraisal Criteria**

| Criteria | Model | Instrument |
|---|---|---|
| 1. Relevancy | Does the model describe the policy content | Does the instrument relate directly to the policy problem? |
| 2. Distortion | Is there a bias between the model and the reference system | Will the instrument cause distortion of other social or economic processes? |
| 3. Structural integrity | Is the model design based on internally consistent principles? | Is the instrument based on internally consistent principles? |
| 4. Reproducability | What is the model's 'track record' for replicating historical data? | Has the instrument been successful in similar situations? |
| 5. Tractability | Is the model easily used? | Is the instrument easily used? |
| 6. Accessibility | Are the model's input and output familiar and intelligible? | Is information available to make the instrument work and to monitor its effects? |
| 7. Flexibility | Is the model design capable of undergoing change? | Can the instrument work in a changing environment? |
| 8. Common sense | Are the model's forecasted results offensive to basic intuition? | Does intuition tell one the instrument should be effective? |
| 9. Credibility | Is there consonance between the model-builder and the policy-makers? | Do those administering the instrument believe it will be effective? |
| 10. Efficiency | What are the costs associated with operating the model? | What are the costs associated with operating the instrument? |

From: "From Social Theory to Policy Design" by S. H. Linder and B. G. Peters, 1984, *Journal of Public Policy, 4* (3), p. 256.

In addition to the instruments to be used, policy designs also state the rules adopted. Rules often prescribe the actions of targets and agents. Timing and procedures are among the key rules often specified. Timing refers to the deadlines for compliance with the policy that are specified for agents or targets. Policies may take effect immediately or at some time in the future. Staged implementation may be structured into the policy design in order to accommodate technical learning, or to develop capacity within an agency. Procedures may suggest the forms and access to decision making, as well as the reporting requirements. Monitoring and feedback mechanisms may also be specified in the procedures outlined in the policy design.

Systematically analyzing these elements; the goals, agents and targets, and their linkages, in a number of policy designs will allow policy makers to make more reasoned comparisons. Schneider and Ingram (1989) suggest that such an analysis will "make possible self-conscious and systematic transference of ideas in policy designs" (p. 72). The characteristics of policy designs can be related to the policy making contexts in which they were developed, and to different kinds of policy goals and policy outcomes. This process of systematically pinching ideas by analyzing the logic of a larger sample of policy examples, enables policy analysts to overcome the biases introduced by the decision heuristics commonly used in informal design processes.

## Conclusions

Policy design has not yet received the full attention of policy scholars and decision makers. Common assumptions are that policy design is technical and specific, or so creative that it is an art. In either case the prevailing view is that systematic study of policy design is impossible. Indeed, most discussions of policy analysis only briefly consider policy design. Only recently have scholars attempted to describe how designs are actually devised, or to identify the various approaches to design (Alexander, 1982; Bobrow and Dryzek, 1987; Dryzek, 1983; Ingraham, 1987; Linder and Peters, 1985; Schneider and Ingram, 1989).

In part, the renewed interest in policy design responds to the current calls for a new generation of policy research which will apply the lessons of implementation studies to more powerful frameworks, and which will produce more useful information for policy makers (McDonnell and Elmore, 1988). Policy research must move beyond the static descriptions of factors influencing effective implementation generated from studies of individual programs or groups of programs (e. g., Mazmanian and Sabatier, 1983). The policy implementation and policy reform literature suggests that many policy failures

can be traced to the flaws in the instruments of government, and in policy design. McDonnell and Elmore (1987) propose to "move back from specific programs and focus on their underlying mechanisms as a way of generating hypotheses about the links among policy, implementation patterns, and ultimate effects" (p. 4). Their argument echoes Salamon's (1981) criticism that implementation research has been "fast heading for a dead end" because it has focused on the wrong unit of analysis. Instead of focusing on individual programs, Salamon suggests concentrating on "the generic tools of government action, . . . the 'techniques' of social intervention that come to be used, in varying combinations, in particular public programs" (p. 256). Investigations of how these different tools of government action work, and how they can be adapted to different purposes, can provide decision makers with a usable body of knowledge to draw from when deciding what instrument, or combination of instruments, to adopt.

The alternative instruments and design processes outlined in this paper represent an initial step in this new agenda for policy research. In seeking to develop a synthesis of classifications of policy instruments and their characteristics, the paper contributes to an analytically underdeveloped area of educational policy research. By assessing one approach to policy design, the paper provides both educational policy researchers and policymakers with additional insights about policy design.

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## Notes

1 Bobrow and Dryzek (1987) provide a comprehensive review of current approaches to analysis.

2 Salamon (1981) puts forward ten hypotheses regarding the basic dimensions of policy instruments.

3 The influential Grace Commission appointed by President Reagan in 1982 to identify opportunities to reduce costs in the U. S. federal government indicated that to privatize means "to provide services without producing them" (p. i).

4 See Ostrom and Ostrom (1977) for a discussion of public good and public choices. They define a public good as "one which is not subject to exclusion and is subject to jointness of consumption or use" (p. 7).

5 For a discussion of how tax expenditures have been used to deliver financial benefits to taxpayers see Surrey (1973). For a more recent Canadian perspective on tax expenditures see Maslove (1981).

6 Doern and Phidd (1983) indicate that the issue of tax expenditures "crystallized in relation to corporate tax breaks during the 1972 election when NDP leader David Lewis coined the phrase corporate tax bum" (p. 117).

7 Illustration of the scope of regulation in Canada can be found in the Economic Council of Canada(1981). Reforming regulation. Ottawa: Minister

of Supply and Services. For a discussion of the research directed at regulation in Canada see Stanbury and Lermer (1983).

8 Both the Holmes group and Carnegie forum published reports outlining the dimensions of this problem and their prescriptions for government action which included some capacity-building propositions. See Soltis (1987) and the full edition of the Teachers College Record, (1987). 88(3) for a description of the U.S. Holmes Group Report, reaction to it from academics and practitioners, and a critical commentary.

9 This synthesis is drawn, in part, from Pal (1987).

10 Examples of a query response instrument are "Question period" in the legislature and roadside tourist information booths.

11 Notices in family allowance cheques, and other universal payments indicating the date of the government's census is an example of broadcast dissemination.

12 A Canadian example of a permanent commission is the Economic Council of Canada.

13 Subsidies are particularly common instrument used by all levels of government in Canada because of the country's size and the remoteness of some regions from core industrial activities.

14 Hood (1983) describes the combinations, linkages and substitutions of government tools that are possible for each of the four government resources: nodality, treasure, authority and organization.

15 Peters and Hogwood (1980) distinguish policy succession from policy innovation, which involves the entry of government into a new field, and policy termination, which implies the departure of government from some activity.

16 For another critique of the centrality-of-coercion" hypothesis see Woodside (1985).